

Group Memory
Bridge Construction Forum – South
March 8, 2006
San Diego

Upshot

These are the assignments made at the meeting.

Ref. #	Who	What	When
1	Rusty Crain	Get picture of waste slab detail	See separate "Action Item" List.
2			
3			
4			

1. *Special note for website posting:* These are the Facilitators recorded notes from the Forum that were shown on the screen during the discussions, organized by group discussion topics of: Cost Reduction Incentive Proposals (CRIPs), Work Window Restrictions, Bridge Construction Acceleration, and The Human Factor. The Forum also included a Caltrans Management Panel. Only brief notes were recorded of questions asked during this session. Several documents are posted separately from these notes, including: The Forum "Agenda", Powerpoint presentations, and a combined "Action Item" list from both the northern and southern Forums.
1. Any questions or comments on the 2006 California Bridge Construction Forums or information posted on the website may be emailed to: Dolores_Valls@dot.ca.gov

Critique from this meeting:

What went well	What Needs Improvement
1.	1.

1. CRIPS Process

1. 1. Is there a minimum dollar amount below which it is not worth the money to look at it?
1. 2. Need to put more expedite into the CRIPS. VA studies seem to go through faster. Typically \$150-200K it is faster to go through VA process.
1. 3. Retaining walls – elaborate textures, with expansion joints not at intervals per Std Plans. Sometimes we can shift the joints around, sometimes bridge rep says it needs to be a CRIP. Which way should this be looked at? CRIP process is very restrictive.
1. 4. CRIPS take too long – Not enough time to get a CRIP done, so we avoid it. Too much delay.
1. 5. Need to expedite CRIPS. On pile jobs we don't pursue things because they won't get approved.
1. 6. Technical review is so painful – what are you looking for? What is the standard?
1. 7. What is the priority for CRIP? It needs to be #1 priority for those doing the CRIP review, not just added work.
1. 8. How important is it to the State? How many people are involved in the review process? Seems like it is more important to the contractor than to the state...
1. 9. Lots of leg work is needed. The percentage of savings netted to the contractor should change – put the incentive more into it... (this is set by statute.)
1. 10. There needs to be a strong advocate at the field level to sell this. There needs to be a passion at the field level.
1. 11. You have to be careful because you are stepping on the toes of the design engineer. You need to be able to sell the idea gently – eloquently to the design engineer.
1. 12. FHWA Buy-in – sometimes is an obstacle.
1. 13. The NIA factor – asking the design engineer to review your idea to change the design is tough to sell to the design engineer. (Not invented here) Caltrans needs to spend time with the design people to let them know that a CRIP is not a negative thing to their career. Also, can we have someone else review the design besides the original design engineer, to remove ego from the problem?
1. 14. Specialized CRIP reviewers would pay for themselves. Is there enough CRIP stuff to make this worth the time?"
1. 15. CT: Sometimes solutions that seem easy and obvious have complex issues involved – multiple stakeholders, etc. Many factors go into this.
1. 16. CT: Department Constructability review process is being worked on to improve it.
1. 17. Many disincentives to the process.
1. 18. CRIP review often seems like "That's not my job." Need to get the people together in the same room who have the authority. Need to take the initiative to get an answer, not pass the buck to another technical area – can you use teleconference, video conference, etc. to get the proper people together all at once?
1. 19. Revised spec to include time for review of CRIP. Can you transfer days to the design reviewer to review CRIP?
1. 20. Start reviewing CRIP during administrative time.

1. 21. Shoring designs never approved... We pay our structural engineer to process the design which ultimately is CT design. What is the point of this review, which really seems more like a redesign? Why can't CT accept another engineer's work?
1. 22. Why isn't design team involved in the initial CRIP process with the local engineers? Get buy-in sooner?
1. 23. CT: CRIP is an idea, not a design. CRIP could be designed by CT once the concept is brought forward. This might remove some of the back-and-forth. Maybe CT should try this out.
1. 24. CT: Contractors may have more success getting permitting agency approval than CT.
1. 25. CRIP specification requires full design, not just an idea.

2. Work Window Restrictions

2. 1. When restrictions are set in contract, do the people who negotiate understand the cost of the item? Negotiators need to know and understand what they are giving away.
2. 2. We see examples of other contractors working all day long beyond the work window given to us.
2. 3. Best people should be negotiating with Fish & Game. Sometimes after the bid, we are able to get a little more out of the permitting agency.
2. 4. Why are work windows out of sync with the contract work to be done?
2. 5. Shorter shifts cost a lot of money. Can't get an operation started and stopped with the short windows. We need a reasonable amount of time to get the work done.
2. 6. Shorter windows take more days and more nights. Five hours is not enough time to strip falsework.
2. 7. CT: Bring your ideas to the District Management team if you need to propose some change to work windows. Get the RE's to bump the ideas up, not just say no.
2. 8. Traffic Management Team needs to reflect the reality of the traffic in their areas. Some restrictions don't make sense, when you look at the actual traffic. Some restrictions make the work unsafe, and for no reason.
2. 9. Fish & Game – We need a better definition of the restrictions. Are there things that can be done within a window that F & G would be OK with?
2. 10. CT: Tight work windows – maybe we should engage with our design groups to discuss construction systems that would work better with the work windows.
2. 11. Partnering – Sometimes we can get the chance to work with and talk with others to get things done when we have a great working relationship. RE has a big impact on the effectiveness of the job.
2. 12. Partnering – We never see Traffic or Environmental in the partnering session. We should see everyone involved in the project there. Everyone needs to understand what is needed to get the work done.
2. 13. CT: We need to know the reasons for restrictions so we can be creative in dealing with them.

2. 14. CT: Boilerplate Permit language for windows should be written and clarified in the specs.
3. Bridge Construction Acceleration
 3. 1. Five hour work windows drastically decreases production – increase the window over a couple of weeks you can increase productivity.
 3. 2. Structures Foundations – pile installation – mitigation. Time involved in the process – can we streamline that process?
 3. 3. Standardized plan on wet pile situations could reduce turn around time.
 3. 4. Anomaly problems in California are greater by far than nationwide statistics. Maybe Caltrans is holding contractors to an impossibly high standard. Many products don't get mitigated anyway. A whole different attitude has to be taken. The work has to be "good enough" not perfect. Drilling contractors are being asked to do things they can't do.
 3. 5. Submittal review – CT holds submittals because they have time. They should turn the submittals back ASAP, not stretch it out because they have four weeks to do them. If CT can get the submittal approved sooner they need to.
 3. 6. Change the submittal process – Have some people who only focus on submittals as their number one priority, especially on jobs which are being accelerated.
 3. 7. CT says "We don't have the people we need to get the job done...." CT can use this as an excuse --- why? We can't use it.
 3. 8. Lack of ownership by CT to get things done is apparent.
 3. 9. CT should survey personnel on site on how they preformed. Use the information about how the RE did on the submittal process, etc. and improve things.
 3. 10. Utility issues can delay work a lot. Need to improve coordination between CT and utility companies. Utility issues need to be focused on in advance.
 3. 11. Utilities directly impacted primarily by bridge – give contractor direct control over the installation of the utilities – either by their own forces or whatever is approved by the Utility Companies.
 3. 12. Delay notice to proceed needs to be used carefully so it does not become an excuse - - some projects need this. Special purchasing may be a good use of this...
 3. 13. Two step process – notice to proceed for submittals and then a notice to proceed for actual beginning of work
 3. 14. Utility impact – many times it is the little unknown items that will impact the project. Need to do survey of utility as first order of work so issues can be cleared right away.
 3. 15. Pre-cast, offsite construction with drop-ins can work better than building things on-site. This needs to be considered in the design phase.
 3. 16. Rapid setting concrete – use of ... We are using this for pavements... Can they be used for structural components?
 3. 17. Lengths of pre-cast units – what spans could CT actually allow?
 3. 18. Inconsistencies of what is allowed with regard to stay-in-place forms from one job to the next by CT – Need to make things standard in the specs if possible.
 3. 19. Shorten the waiting period for specified duration of closure pour.

3. 20. (Rusty: Include a picture of waste slab detail)
 3. 21. CT: We have requested a research project on closure pours.
 3. 22. Temporary shoring – may have to be cantilevered, etc... permanent work does not take advantage of that cost, work and time – if this has to be done, take advantage of it in the permanent work.
 3. 23. We have excessive rebar lap length – could shorten this.
4. The Human Factor
4. 1. Need to have the idea come from the top down to work with the other side, even though the frustration level may be high.
 4. 2. CT method “by the book” does not allow for any creativity, or any thinking at the site. Accountability, etc. removed from equation. Need to build trust in the field, allow more empowerment at the job site. This is win-win for both.
 4. 3. Partnering – work together – Now it is a buzz word, excuse. We need to work together.
 4. 4. Partnering – both sides decide to use a decision tree and move issues up – this is valuable. Need to move issues up to where the person getting it can do something about it. Need to move up quickly.
 4. 5. What incentive on CT side to get the job done on time, within budget? Contractor has incentive. Seems like only incentive is negative.
 4. 6. Micro-management is a concern
 4. 7. Too much micro-management
 4. 8. Local unions get money for training and incentives, but they don’t help us very much. Union training is a major bottle-neck.
 4. 9. Too easy to pass the buck today with technology: e-mail, blackberry, cell phone, etc.
 4. 10. Lack of experience on CT side – too much reliance on policy and procedure.
 4. 11. Need to allow people to learn. People make mistakes when they learn. You need to allow this.
 4. 12. CT wants a piece of paper for every minor detail. There seems to be a lack of willingness to allow this. CT needs to allow their people to have more authority.
 4. 13. No incentive for CT to make decisions.
 4. 14. e-mail – 50 people get cc’d. This creates more “worry” about what others will say or think about something....
 4. 15. Mentoring program at CT- is there one? Is there someone the person in the field can call for assistance?
 4. 16. CT needs to look at their culture – look at things like private industry.
 4. 17. People in the field lack the years of experience. Caltrans mentality of employees seems to be “you are not OK unless you are promoting up and out...” They have gotten rid of the experienced levels in the field.
 4. 18. This is not only a Caltrans issue. It is also an industry problem. We all need to look at this and ask ourselves what we can do to encourage others to enter the field.

4. 19. Get out there and talk to young students about a career in civil engineering. Visit schools.
4. 20. Invest time in interns.
4. 21. 70% of the people entering their fourth year already have a job. You need to get them early.
4. 22. We need to get more people INTO the engineering schools.
4. 23. We need more carpenters and laborers too. We need to encourage trades. Industry needs to support the trades, too.
4. 24. WE need a targeted coordinated outreach effort.
4. 25. CT: Contractors need to educate the RE.
5. Management Panel: See separate "Bios" document posted for Management Panel members.
 5. 1. Opening statements were made by all Management Panel members, as follows
 5. 2. Bob Buckley – The Division of Engineering Services is concerned with the amount of work that is headed to advertisement as well as cost estimates as far as Industry capacity and State budgets to award projects.
 5. 3. Rick Land – The Department will be putting out \$3.5 billion worth of projects this year. We recognize that the Department is only a small piece of the construction business for Industry and we have a very cyclic nature of putting out our work due to funding.
 5. 4. Suzanne (for Jay Norvell) – The Division of Environmental Analysis is involved as a project advocate and agency negotiator. Most work windows are usually a result of state laws. The Department responsibility is to minimize harm and work within regulations.
 5. 5. Mark Leja – The Division of Design is actively working on improving how the Department staff estimates the cost of projects (Engineers Estimates) and the development of working day schedules. The Division is also working with the California Transportation Commission on cost over-runs. The Division is reviewing Department process of performing constructability reviews prior to advertising a project.
 5. 6. Bob Pieplow – The Division of Construction is actively working on the Governors Go California effort. There are 180 action items that his office is working on. We want to be the customer of choice.
6. Management Panel Questions from the floor:
 6. 1. Q: What incentive on CT side to get the job done on time, within budget? Contractor has incentive. Seems like only incentive is negative. A: The Department has a limited number of awards available for staff such as Partnering awards, Delivery awards, and Gold/Silver awards.
 6. 2. Q: What is the Department doing about "Micromanagement" of Resident Engineers? A: The Division of Construction is putting out new RE Guidelines, which will include consistent classifications for Resident Engineers.
 6. 3. Q: What is the Department doing to help with concrete suppliers? It is typical that concrete supplied to Caltrans projects increase the price from \$95 per cubic yard to \$135. For wet pile work, why is the Department testing – there is no testing required on Hospital work that we have performed? A: There may be a desire for a high quality

product on Department projects – to match its design intent for structures that will be available to the public for its 75 year design life with minimal maintenance.

6. 4. The Department needs to look at our concrete Plant Inspection program. There was a case where the plant was shut down due to dirty aggregates.
6. 5. The Department should look at our process for approval of concrete mix design – there are mix designs getting rejected. There is a lot of subjectivity involved, such as 92 minute old concrete and Kelly ball tests.
6. 6. Q: Does the Department feel they are getting value for its pile mitigation requirements? A: Is the bar too high? FHWA has participated. The Go California effort includes having a benchmark with other states. Other states use the same test. The Department is looking to move to performance-based specifications.
6. 7. Q: What is the sense of urgency for Caltrans staff? A: Caltrans staff have performance measures, conform to project specifications, and value partnering. More two way communication may be needed on “urgency”.
6. 8. The review process for shoring designs need to be reviewed. There are outside consultant designs (by PE’s) being rejected.
6. 9. Q: Is the Department looking at its Foundation logs? You are throwing money at unknowns and upsizing shoring specs for risk of boring logs. A: The Department recently implemented a standardized foundation report. Geotechnical Services is looking into more Industry outreach.
6. 10. Q: Is the Department considering SWPP bid items? Yes. New specifications have been drafted and will be piloted on several projects.